Soda Ash (Sodium Carbonate · Na_2CO_3)

Anhydrous Sodium Carbonate 99.2% Min · Dense Low-Dust Glass Grade · Light High-Absorptivity Grade

Effective Date: 23 Nov 2026
CAS: 497-19-8 · **EC:** 207-838-8
Supplier Tel: +44 744 913 9023

PURITY (NA_2CO_3)	SIGNAL WORD	HAZARD STATEMENT	INDEX NO. (CLP)	TRANSPORT STATUS
99.20% Wt Min	WARNING	H319 (Eye Irrit. 2)	011-005-00-2	Non-DG (All Modes)

WARNING **Serious Eye Irritation (Category 2 / 2A · H319)**

H319: Causes serious eye irritation. | Alkaline solid/solution (pH ~11.4 at 1%); airborne dust or wet slurry causes stinging irritation to eyes and mucous membranes. Non-flammable; reacts vigorously with strong acids to evolve CO_2 gas and heat.



NFPA 704
Health: 2 (Eye Irrit.)
Flamm.: 0 (Non-Flamm.)
Reactivity: 0

SECTION 1 Identification of the Substance & of the Supplier

1.1 & 1.2 SUBSTANCE IDENTIFIER & RELEVANT USES

Product Name: Soda Ash Dense & Soda Ash Light (Anhydrous Sodium Carbonate)

Formula / Synonyms: Na_2CO_3 · Disodium Carbonate, Calcined Soda

Identified Uses: Flat/container glass manufacturing, soaps & detergents, sodium silicate, chemical synthesis, metallurgy, pulp/paper & pH regulation.

Uses Advised Against: Direct mixing with concentrated acids in unvented vessels; contact with molten aluminum.

1.3 & 1.4 SUPPLIER DETAILS & EMERGENCY CONTACT

Supplier Role: Global Commodity Supplier / Distributor (Commercial Desk)

Supplier Name: Beroil Energy Group

Office Address: 4-6 Middlesex St., E1 7JH, London, United Kingdom

Email / Phone: info@beroilenergy.com · +44 744 913 9023

Emergency Line: +44 744 913 9023 (Commercial) · Dial local emergency services (999 / 112 / 911) or Poison Center for acute eye exposure or major spills.

SECTION 2 Hazards Identification

2.1 GHS / CLP Classification: Serious Eye Damage / Eye Irritation, Category 2 / 2A (**H319**: Causes serious eye irritation). Not classified as skin corrosive, flammable, or toxic to aquatic life under CLP criteria.

2.3 Other Hazards: Generates localized heat upon wetting (exothermic hydration) and forms alkaline slippery films on damp concrete. Not PBT / vPvB.

2.2 Label Elements & Precautionary Statements: Signal Word: **Warning** (Pictogram: GHS07 Exclamation Mark).

P264: Wash face, hands and exposed skin thoroughly after handling.

P280: Wear eye protection / face protection (chemical dust goggles).

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P337+P313: If eye irritation persists: Get medical advice/attention.

SECTION 3 Composition / Information on Ingredients

3.1 SUBSTANCE CHEMICAL NAME	CAS NO.	EC NO.	CLP INDEX NO.	CONC. (% W/W)	HAZARD CLASSIFICATION (CLP/GHS)
Sodium Carbonate Anhydrous (Na_2CO_3)	497-19-8	207-838-8	011-005-00-2	≥ 99.20%	Eye Irrit. 2 (H319)
Sodium Chloride (NaCl) & Sodium Sulfate Trace	7647-14-5	231-598-3	—	≤ 0.70% NaCl · ≤ 0.05% SO_4	Non-hazardous inorganic process salts

SECTION 4 First-Aid Measures

EYE CONTACT (PRIORITY)

Flush immediately with copious cool water for at least 15 minutes while holding upper and lower eyelids open. Remove contact lenses after first 5 minutes if easy. Seek prompt medical / ophthalmologist care if irritation continues.

SKIN CONTACT

Brush off dry powder and wash skin thoroughly with plenty of soap and clean water. Moisturize dry skin; seek medical attention if persistent dermatitis develops.

INHALATION

Move affected person to fresh air. Blow nose gently and rinse mouth/throat with water. Seek medical attention if coughing or nasal irritation persists.

INGESTION

Rinse mouth immediately; give 200–300 ml water or milk to dilute stomach alkalinity if conscious. Do NOT induce vomiting (risk of alkaline esophageal irritation). Seek medical advice for large swallows.

4.2 & 4.3 Symptoms & Medical Care: Redness, watering, and sharp pain on eye contact; sneezing or dry throat from Light Soda Ash dust. Treat symptomatically with thorough lavage.

SECTION 5 Fire-Fighting Measures

5.1 Suitable Extinguishing Media: Substance is 100% non-combustible and does not burn. Use extinguishing agents suited to surrounding packaging materials (water spray, foam, dry chemical, or CO_2).

5.2 Special Fire Hazards: Contact of hot wet slurry with light metals (Aluminum, Zinc) can slowly generate hydrogen. Decomposes only at extreme temperatures (> 851 °C) releasing irritating sodium oxide fumes.

5.3 Firefighter PPE: Wear SCBA and full protective gear if fighting fires inside closed warehouses; avoid inhaling caustic smoke aerosols and contain strongly alkaline runoff water.

SECTION 6 Accidental Release Measures

6.1 Personal Precautions: Avoid creating airborne dust (especially Light grade). Wear dust-tight goggles, nitrile gloves, and a particulate respirator (N95/FFP2). Slippery when wet!

6.2 Environmental Precautions: Keep dry spills out of storm drains and waterways (high alkalinity spikes aquatic pH).

6.3 Clean-Up Methods: Vacuum or sweep dry powder gently using plastic or steel tools (do NOT use aluminum shovels on wet ash). Collect uncontaminated product in dry sealable drums; flush trace residue only after pH neutralization where permitted.

SECTION 7 Handling and Storage

7.1 PRECAUTIONS FOR SAFE HANDLING

Minimize dust generation during dumping of 25/50 kg bags and FIBC spouts. Use local exhaust ventilation at transfer chutes and mixers. Ensure emergency eyewash fountains are directly adjacent to unloading and batching zones. Wash hands thoroughly before eating.

7.2 STORAGE CONDITIONS & INCOMPATIBILITIES

Store tightly sealed in cool, dry, covered warehouses to prevent moisture absorption and caking (forms monohydrate crust). **Incompatible Materials:** Strong acids (vigorous CO_2 effervescence/pressure), fluorine, molten or damp Aluminum/Zinc, phosphorus pentoxide, and lime.

SECTION 8 Exposure Controls / Personal Protection

8.1 OCCUPATIONAL EXPOSURE LIMITS (OELS)

Specific OSHA PEL / ACGIH TLV: None assigned specifically for Na_2CO_3; regulated under alkaline particulate limits:

· **OSHA PEL (PNOR):** 15 mg/m³ (total) / 5 mg/m³ (respirable). | **ACGIH TLV (PNOS):** 10 mg/m³ (inhalable) / 3 mg/m³ (respirable).

8.2 ENGINEERING CONTROLS & HYGIENE

Provide enclosed pneumatic/screw conveyors and bag-dump dust collection hoods for Light Soda Ash. Maintain calibrated emergency eyewash & safety showers near dosing tanks.

EYE / FACE PROTECTION	HAND PROTECTION	RESPIRATORY PROTECTION	SKIN & BODY PROTECTION
Tightly fitting chemical safety goggles (EN 166); add face shield when dissolving concentrated batches.	Chemical-resistant nitrile, natural rubber, or neoprene gloves (EN ISO 374-1).	NIOSH N95 / EN 149 FFP2 particulate respirator when dusty air exceeds limits.	Long-sleeved closed cotton/poly workwear and leather or rubberized safety footwear.

SECTION 9 Physical and Chemical Properties

PROPERTY	VALUE / DESCRIPTION	PROPERTY	VALUE / DESCRIPTION
Appearance & Odor	White crystalline solid (Dense granular or Light fine powder); odorless	**Molecular Formula / Weight**	Na_2CO_3 / 105.99 g/mol
pH (1% Aqueous Solution)	~11.4 – 11.5 @ 25 °C (Strongly alkaline)	**Melting / Boiling Point**	851 °C (melts) · Decomposes upon further heating
True Specific Gravity	2.54 g/cm³ @ 20 °C	**Loose Bulk Density**	950–1,100 kg/m³ (Dense) · 500–650 (Light)
Water Solubility (@ 20 °C)	~215 g/L (exothermic hydration)	**Flash Point / Flammability**	Not applicable — Non-combustible solid
Vapor Pressure	Negligible (non-volatile inorganic salt)	**Explosive / Oxidizing**	Non-explosive · Not an oxidizer

SECTION 10 Stability and Reactivity

10.1–10.3 Stability: Stable anhydrous salt under dry storage; slowly absorbs ambient moisture and CO_2 to form sodium bicarbonate/sesquicarbonate.

10.4 Conditions to Avoid: Moisture ingress, atmospheric exposure, and contact with acidic vapors.

10.5 Incompatible Materials: Strong acids (violent CO_2 gas evolution), Aluminum/Zinc alloys when wet, fluorine, lithium, 2,4,6-trinitrotoluene, and phosphorus pentoxide.

10.6 Decomposition Products: CO_2 and sodium oxide above 851 °C.

SECTION 11 Toxicological Information

11.1 Acute Toxicity (OECD SIDS / REACH Data):

· **Oral LD_{50} (Rat):** 2,800 mg/kg bw | **Dermal LD_{50} (Rat):** > 2,000 mg/kg bw

· **Inhalation LC_{50} (2h aerosol):** 2,300 mg/m³ (Rat) · 1,200 mg/m³ (Mouse)

Irritation / CMR: Classified **Eye Irrit. 2 (H319)**; non-irritant to intact skin; not sensitizing; not mutagenic, carcinogenic (IARC/NTP/OSHA), or reprotoxic.

SECTION 12 Ecological Information

12.1 Ecotoxicity (pH-Driven Alkaline Spike): Fish 96h **LC_{50} = 300 mg/L** (*Lepomis macrochirus*) / 310–1,220 mg/L (*Pimephales promelas*); *Daphnia magna* 48h **EC_{50} = 265 mg/L**.

12.2–12.5 Persistence & Bioaccumulation: Inorganic salt; biodegradation not applicable. Dissociates to naturally abundant Na^+ and carbonate/bicarbonate ions; does not bioaccumulate; not PBT/vPvB.

SECTION 13 Disposal Considerations

13.1 Waste Treatment: Clean uncontaminated powder should be reclaimed for industrial pH adjustment or detergent/glass batching. Waste solutions should be neutralized cautiously with dilute mineral acid to pH 6–8 before permitted discharge.

Contaminated Packaging: Shake empty PP+PE bags and FIBC jumbo liners clean and recycle via industrial plastics contractors.

SECTION 14 Transport Information (IMDG / ADR / RID / IATA-ICAO)

TRANSPORT MODE / REGULATION	UN NO.	PROPER SHIPPING NAME	CLASS / PG	MARINE POLLUTANT & CARGO PRECAUTIONS
Sea Freight (IMDG Code)	—	Not Regulated as Dangerous Goods	Non-DG	Marine Pollutant: No · Protect moisture-barrier bags from rain/bilge dampness
Road / Rail (ADR / RID / DOT)	—	Not Regulated as Dangerous Goods	Non-DG	Segregate from strong acids and aluminum drums/vessels during haulage
Air Freight (IATA / ICAO)	—	Not Regulated as Dangerous Goods	Non-DG	No hazardous air freight restrictions

SECTION 15 Regulatory Information

15.1 International Inventories: Listed on EU EINECS/REACH (EC 207-838-8, Index 011-005-00-2), US TSCA (CAS 497-19-8), UK REACH, Canada DSL, China IECSC, and Australia AIIC.

Safety Frameworks: Classified under EU CLP Regulation (EC) 1272/2008 (Eye Irrit. 2 H319), UK GB-CLP, and OSHA HazCom 2012.

SECTION 16 Other Information

Full H-Statement: H319 Causes serious eye irritation.

Key Abbreviations: CLP: Classification, Labelling & Packaging · EC_{50}/LC_{50}/LD_{50}: Median Effective/Lethal Conc./Dose · OECD SIDS: Screening Information Dataset · PNOR/PNOS: Nuisance Particulates.

Revision History: Rev. 2.0 (23 Nov 2026) — Full 16-section GHS/REACH supplier SDS edition.

Supplier Notice & Disclaimer (Beroil Energy Group): Beroil Energy Group supplies Dense and Light Soda Ash strictly as global commodity supplier and distributor (not primary chemical producer). Data herein reflects verified OECD/ECHA toxicological & regulatory sources for CAS 497-19-8. Refer to BEG-TDS-SODAASH and shipment SGS/Intertek COA for assay guarantees.